



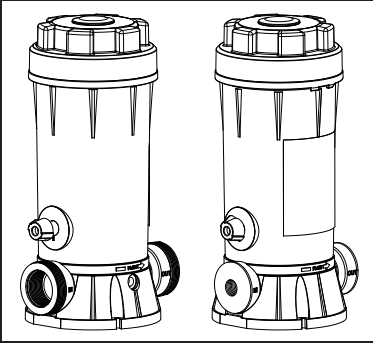
**HAYWARD®**

ISCLSERIES RevD

# Series CL100/110 Series CL200/220

Automatic Chlorine Feeders

## Owner's Manual



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CL100  
CL110  
CL200  
CL220

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## IMPORTANT SAFETY INSTRUCTIONS

- ⚠** This is the safety-alert symbol. When you see this symbol on equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury:
- ⚠ DANGER** – indicates an imminently hazardous situation which, if not avoided, **will** result in death, serious injury, or major property damage.
- ⚠ WARNING** – warns about hazards that could cause serious personal injury, death or major property damage and if ignored presents a potential hazard.
- ⚠ CAUTION** – warns about hazards that will or can cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.
- ⚠ NOTICE** – indicates special instructions that are important but not related to hazards.



### READ AND FOLLOW ALL INSTRUCTIONS

**⚠ WARNING** – Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

**⚠ DANGER** – **Mixing chemicals or using fast dissolving chemicals may result in explosion and/or fire. To avoid death, serious injury, or major property damage:**

- Use only slow dissolving Trichlor Chlorine tablets.
- Never use fast dissolving Trichlor Chlorine tablets.
- Never mix chemicals.
- Never mix Trichlor Chlorine tablets with Calcium Hypochlorite, or with any other form of concentrated chlorine or other chemicals. Fire and/or explosion may result.
- Never add any other types of chlorine, pH adjusters, shock treatments or algacides through the skimmer. If these products must be used, they should be added directly into the pool water.
- Never isolate bromine feeder with valves or other devices.

**⚠ WARNING** – Wear eye and skin protection while maintaining or servicing this unit.

**⚠ WARNING** – Do not inhale fumes from the chlorinator or chemical container.

**⚠ WARNING** – Chlorine feeder may be under pressure. Use caution removing cover.

### SAVE THESE INSTRUCTIONS



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**⚠ WARNING – Suction Entrapment Hazard.** Suction in suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:



**Hair Entrapment:** Hair can become entangled in suction outlet cover.



**Limb Entrapment:** A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.



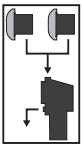
**Body Suction Entrapment:** A negative pressure applied to a large portion of the body or limbs can result in an entrapment.



**Evisceration/ Disembowelment:** A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/disembowelment.

**Mechanical Entrapment:** There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

**⚠ WARNING – To Reduce the risk of Entrapment Hazards:**



- When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- Dual suction fittings shall be placed in such locations and distances to avoid “dual blockage” by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the listed flow rating.
- Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- Install suction outlets in accordance with latest ASME, APSP Standards and CPSC guidelines. Follow all applicable National, State, and Local codes.
- Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.

**⚠ WARNING –** Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.

**⚠ WARNING –** Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.



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**⚠ WARNING** – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every ten years or if found to be damaged, broken, cracked, missing, or not securely attached.

**⚠ CAUTION** – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children.

**⚠ WARNING** – Never operate or test the circulation system at more than 50 PSI.

**⚠ WARNING** – Never change the filter control valve position while the pump is running.

**⚠ WARNING** – To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.



**⚠ WARNING – Hazardous Pressure.** Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.



**⚠ WARNING – Separation Hazard.** Failure to follow safety and operation instructions could result in violent separation of pump and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter manual air relief valve body is in locked position in filter upper body. **Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air.** Purging the system with compressed air can cause components to explode, with risk of sever injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.



**⚠ WARNING – Risk of Electric Shock.** All electrical wiring **MUST** be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do **NOT** use an extension cord to connect unit to electric supply. Provide



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a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment.

**▲ WARNING** – To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

**▲ WARNING** – To avoid dangerous or fatal electrical shock, turn OFF power to all electrical equipment before working on electrical connections.



**▲ WARNING – Risk of Electric Shock.** Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.



**▲ WARNING – Risk of Electric Shock.** Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

**Notes to electrician:** Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG [8.4 mm<sup>2</sup>] (No. 6 AWG [13.3 mm<sup>2</sup>] for Canada) solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. [1.5 m] of inside walls of swimming pool, spa, or hot tub. **IMPORTANT** - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.



**▲ WARNING – Risk of Electric Shock.** Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.



**▲ WARNING – Risk of Electric Shock.** The electrical equipment must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

**▲ CAUTION** – Hayward® pumps are intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.



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## Installation

### CL100/200 (Figure 1)

1. Your CL-100/200 automatic chlorine feeder is designed for permanent installation in the pool water return line.
2. Always install the chlorine feeder after the heater. If there is no heater, install after the filter.

**⚠ CAUTION** – Damage to the heater or filter may result if concentrated chlorine is allowed to flow through them. An in-line positive seal corrosion resistant check valve should be installed to reduce backflow of chlorine gas when the system is shut off. If the chlorine feeder is located below water level, you may want to install a check valve to prevent water backflow when operating/servicing the unit. The CL100 has this feature built in.

3. Both the CL-100/200 are furnished with 1 1/2" female threads. If PVC socket (solvent weld) connections are desired, order SP1500UNPAK2, socket flush union end connectors package. For threaded male and union connectors, order SP1500UNMPAK1 male union connector package (two required). Thread or socket adapters may also be used. Only use pipe sealants formulated and approved for use with ABS plastic connections (e.g. Teflon Tape, Permatex Form-A-Gasket No. 2, Laco Plasto-Joint stick). Do not over tighten pipe fitting. Proper fitting makeup is hand tight plus 1 to 1 1/2 turns maximum.

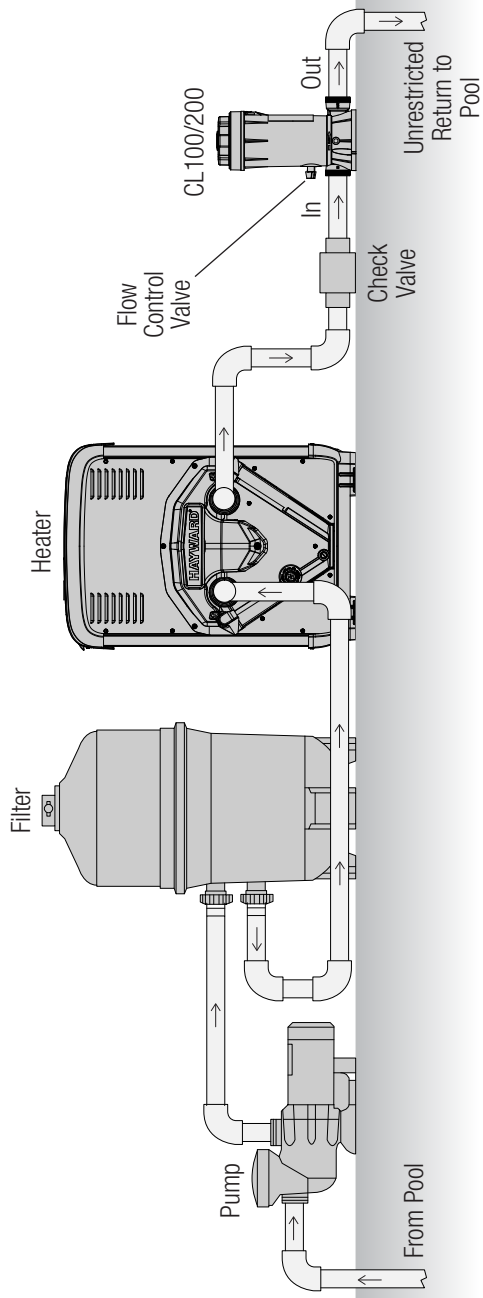
**⚠ NOTICE** – After starting up system, re-check all connections for leaks. Re-tighten as required.

**⚠ CAUTION** – Never install chlorine feeder directly into copper plumbing as pipe damage may occur. If you have brass or bronze backwash valves, or other sensitive metallic components, consult your dealer for precautions or recommendations for your particular system.



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Figure 1: CL100/200 Plumbing Overview





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## CL110/220 (Figure 2)

1. The inlet connection should be made in the piping after the pump and before the filter. Mark location on pipe.
2. The outlet connection should be made in the piping after the heater. If no heater is being used, connection should be made after the filter. Mark location on pipe.
3. Based on the locations from steps. No. 1 and No. 2, cut tubing to required lengths. Be sure ends are cut evenly and cleanly.
4. Wrap Teflon tape on larger male thread of Check Valve and thread it hand tight plus  $\frac{1}{2}$  turn into outlet port of chlorinator. **DO NOT OVER TIGHTEN.**

**▲ NOTICE** – The Check Valve is marked with a “dot”. It also has a ball that “clicks” when you shake it.

5. Wrap Teflon tape on larger male thread of the Inlet Fitting Adapter and thread it hand tight plus  $\frac{1}{2}$  turn into the inlet port of chlorinator. **DO NOT OVER TIGHTEN.**
6. To connect inlet tubing to chlorinator, place Compression Nut over inlet tubing and slide nut up about 2”. Insert the tubing all the way into the Inlet Fitting Adapter socket and, holding tubing in place, tighten nut firmly by hand. Do not over tighten.
7. Connect outlet tubing to the Check Valve in the same manner as in Step 6.

**▲ NOTICE** – The saddle fittings and clamps are designed to fit the O.D. of 1 1/2” or 2” pipe.

8. Drill a 3/8” hole at location identified in Step 1. Clean all burrs, shavings etc. Fit Saddle Fitting, with gasket, into oval shaped hole in clamp and insert fitting into the 3/8” hole. Secure clamp around Saddle Fitting, gasket and pipe and tighten securely to achieve a good seal. Do not over tighten clamp.
9. Drill a 3/8” hole at location identified in Step 2. Install Saddle Fitting as in Step 8.
10. Connect inlet and outlet tubing to the Saddle Fittings with Compression Nuts as in Step 6. Do not over tighten.

**▲ CAUTION** – Never install chlorine feeder directly into copper plumbing as pipe damage may occur. If you have brass or bronze backwash valves, or other sensitive metallic components, consult your dealer for precautions or recommendations for your particular system.

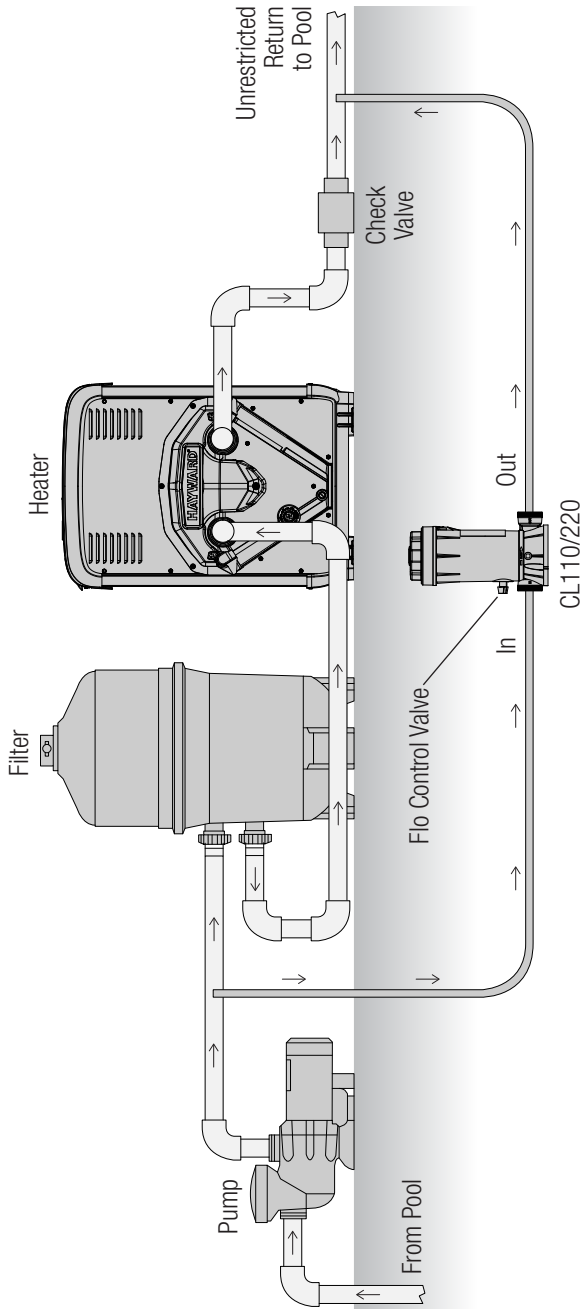
**▲ NOTICE** – After starting up system, re-check all connections for leaks. Re-tighten as required.





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Figure 2: CL110/220 Plumbing Overview





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## Operation

### Before Using Your Chlorinator

Your pool/spa water should be properly balanced and conditioned and should have a chlorine residual of approximately 1.0 to 1.5 ppm. Follow dealer and chemical manufacturer's directions and instructions.

Check chlorine residual daily and adjust the dial valve for more or less chlorine. The chlorine demand for pools and spas varies based on usage, temperature, sunlight, etc. Initially, you'll have to experiment to determine the proper amount of chlorine and the correct valve setting required for your pool and filter time cycle. Follow chemical manufacturer's instructions for proper chlorine level.

**▲ WARNING – Elevated chemical concentrations or hazardous gas hazard.** The introduction of potentially hazardous gas or elevated chemical concentrations into the pool or spa during backwash and periods of no flow in the recirculation system can cause serious personal injury, or death. To avoid:

- Set dosage indicator to zero before stopping flow through the Chlorinator
- Minimize backwash time
- Do not shut down pump for extended periods
- Do not allow bathers into pool or spa area until full flow of system has been reestablished

NSF-50 requires that a flow indication device be installed with all flow through chemical feeders. This flow meter, or flow indicator, should be installed upstream of a CL200. Purchase and install following the instruction provided with the flow indicating device.

NSF qualification testing was conducted utilizing Regal Chemical Company 3" Chlorinated 99% active Trichlor-s triazinetrione Chlorine Tablets, with 90% available Chlorine.

### Refilling Chlorinator

1. Shut off all pumps and pump timers.
2. Turn chlorine feeder flow control valve to "OFF".
3. Verify chlorine feeder return line to pool is unrestricted.
4. Wait one minute to relieve system pressure before attempting to remove cover.
5. If installed in a flooded system, shut off valves to isolate chlorinator.
6. Remove cover.
7. Refill chlorine feeder with slow dissolving Trichlor-Chlorine Tablets.
8. Secure cover to chlorine feeder.
9. If installed in a flooded system, open valves to assure flow from pump to pool.
10. Turn flow control valve on chlorinator to desired setting and restart pump.



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## Maintenance

### To Change O-Ring (CL100/110)

1. Read and follow instructions in Steps 1 to 5 in Refilling Chlorinator section.
2. Remove the O-Ring and replace with a Genuine Hayward Part O-Ring (part no. CLX110K).
3. Replace cover. If chlorinator needs to be refilled, read and follow instructions in Steps 6 to 8 in Refilling chlorinator section.

### To Change O-Ring (CL200/220)

1. Read and follow instructions in Steps 1 to 5 in Refilling Chlorinator section.
2. Pry off Logo Cap, located on the cover of the chlorinator. Unscrew and remove retainer screw. Cover may now be slipped free of the Cover Cap.
3. Replace O-ring with a Genuine Hayward Part O-ring (part no. CLX200K). Reassemble being sure Slip Washers are in place on stem of Cover (inside), and under head of Retaining Screw.
4. Replace cover. If chlorinator needs to be refilled, read and follow instructions in Steps 6 to 8 in Refilling Chlorinator section.

### To Remove Flow Control Valve Handle

Set pointer to FULL. Insert screwdriver in slot opposite pointer, lift up and rotate handle counterclockwise. This allows the handle index lock tab to clear the body ridge.

### To Install Flow Control Valve Handle

1. The flow control valve handle, Genuine Hayward Part CLX200PA, is furnished in two pieces.
2. To install push the handle into the stem and fully install stem into body. You may have to remove handle and reposition to assure the stem is fully seated.
3. Remove handle by pulling straight out.
4. Apply a single drop of Super Glue to the end of the stem, push on handle, positioned in the OFF position. Apply pressure for 30 seconds.

### Winterizing

Where freezing temperatures can be expected, drain all water and remove all chlorine from chlorinator. For in-line permanently installed unit remove drain plug. Carefully remove all tablets and pieces of tablets. Rinse out chlorinator thoroughly with water. Replace cover and drain plug.

### Vacuuming

When vacuuming, close flow control valve to prevent bypass of sediment and possible clogging of control valve.

### Lubrication

Never use petroleum type lubricants on Cover O-Ring. To lubricate use Genuine Hayward Part Jack's Lube No. 327 (Part No. SP032712).



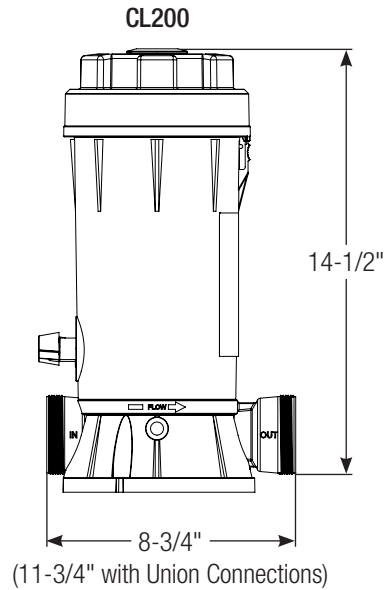
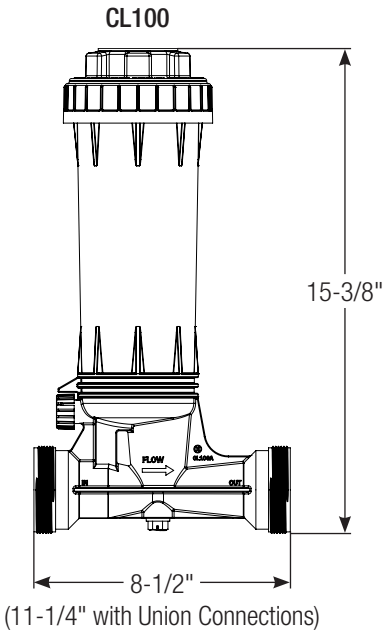
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## Specifications

Maximum Rated Output of CL200	
Control Position	Chlorine Pounds Per Day
Pool 100%	2.30
Pool 50%	0.63
Spa 100%	4.60
Spa 50%	0.48

Maximum Head Loss 2.01 PSI @ 50 GPM

## Dimensions

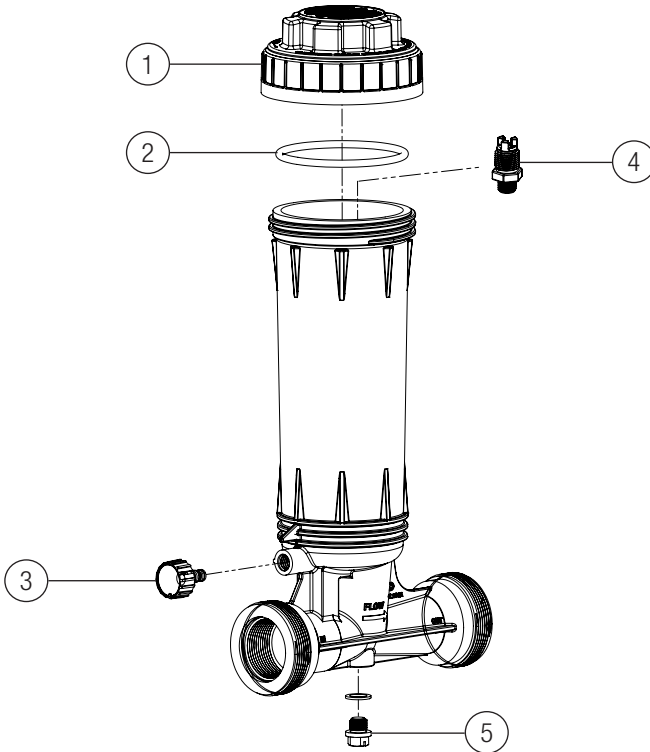




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## Replacement Parts

CL100 Parts Listing			
Ref No.	Part No.	Description	Qty.
1	CLX110C	Cover	1
2	CLX110K	O-Ring	1
3	CLX110FA	Control Knob Assembly	1
4	CLX220CV	Check Valve Assembly	1
5	SPX1700FGV	Drain Plug with Gasket	1
	SP032712	Hayward Jack's Lube #327	1

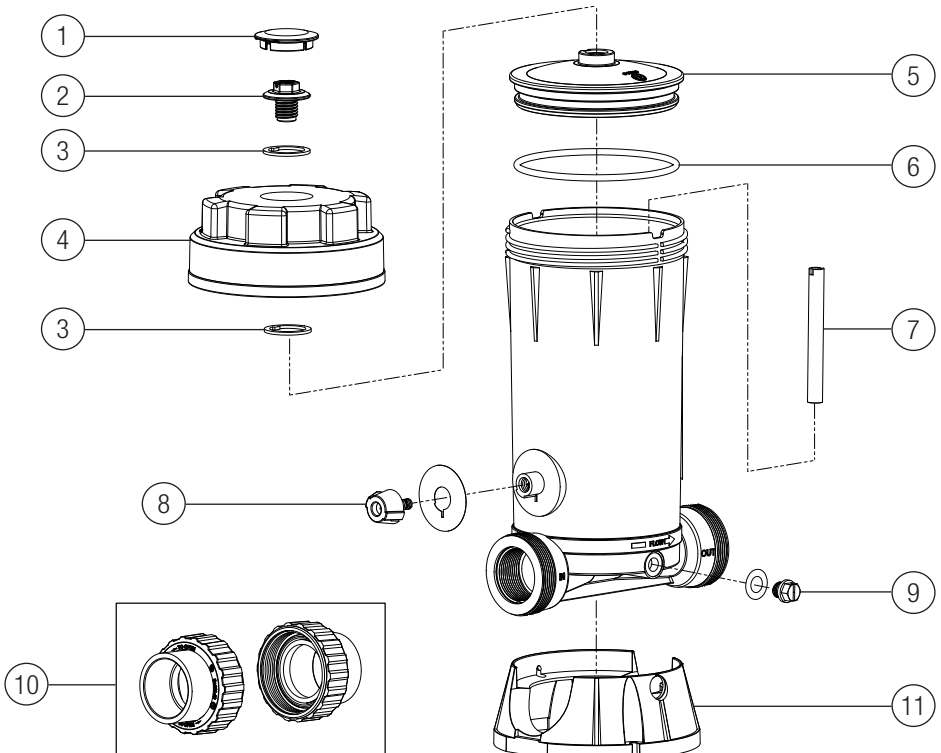




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## CL200 Parts Listing

Ref No.	Part No.	Description	Qty.
1	CLX200E	Logo Cap	1
2	CLX200G	Cover Retaining Screw	1
3	CLX200W	Slip Washer	2
4	CLX200C	Cover Cap	1
5	CLX200B	Cover	1
6	CLX200K	O-Ring	1
7	CLX200H	Feeder Tube (Some Models)	1
8	CLX200PA	Control Valve Assembly	1
9	SPX1700FA	Drain Plug with Gasket	1
10	SPX1500UNPAK	Union Connectors - Socket (2)	--
11	CLX200BS	Base	1
	SP032712	Hayward Jack's Lube #327	1

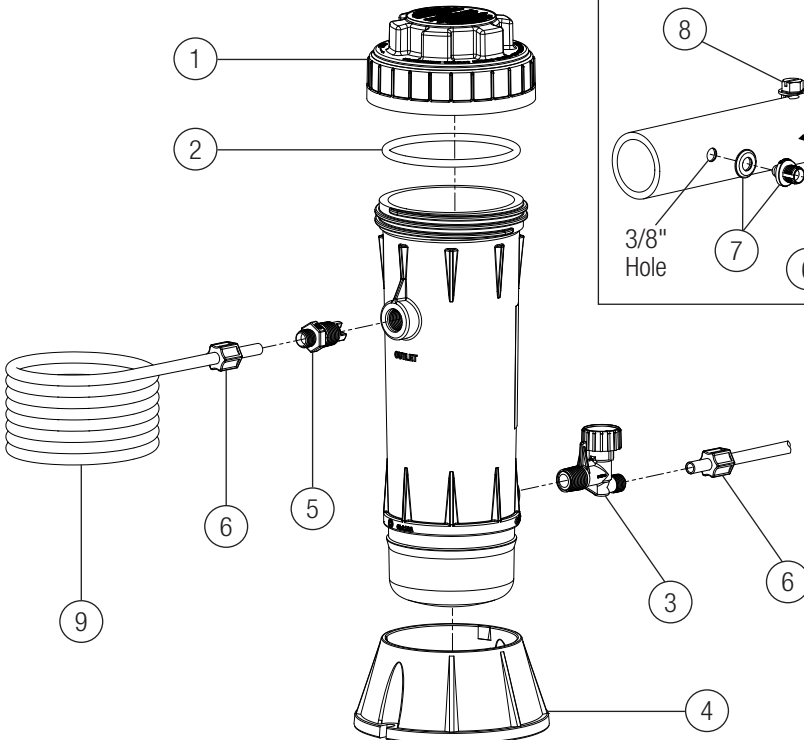




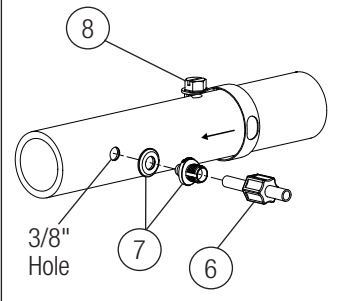
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## CL110 Parts Listing

Ref No.	Part No.	Description	Qty.
1	CLX100C	Cover	1
2	CLX110K	O-Ring	1
3	CLX110DA	Dial Flow Valve	2
4	CLX110B	Base	1
5	CLX220CV	Check Valve Assembly	1
6	CLX220H	Compression Nuts	4
7	CLX220G	Saddle Fitting	2
8	CLX220K	Saddle Clamp	2
9	CLX220J	Plastic Tubing - 8 ft.	1
	SP032712	Hayward Jack's Lube #327	1



### Saddle Clamp Assembly

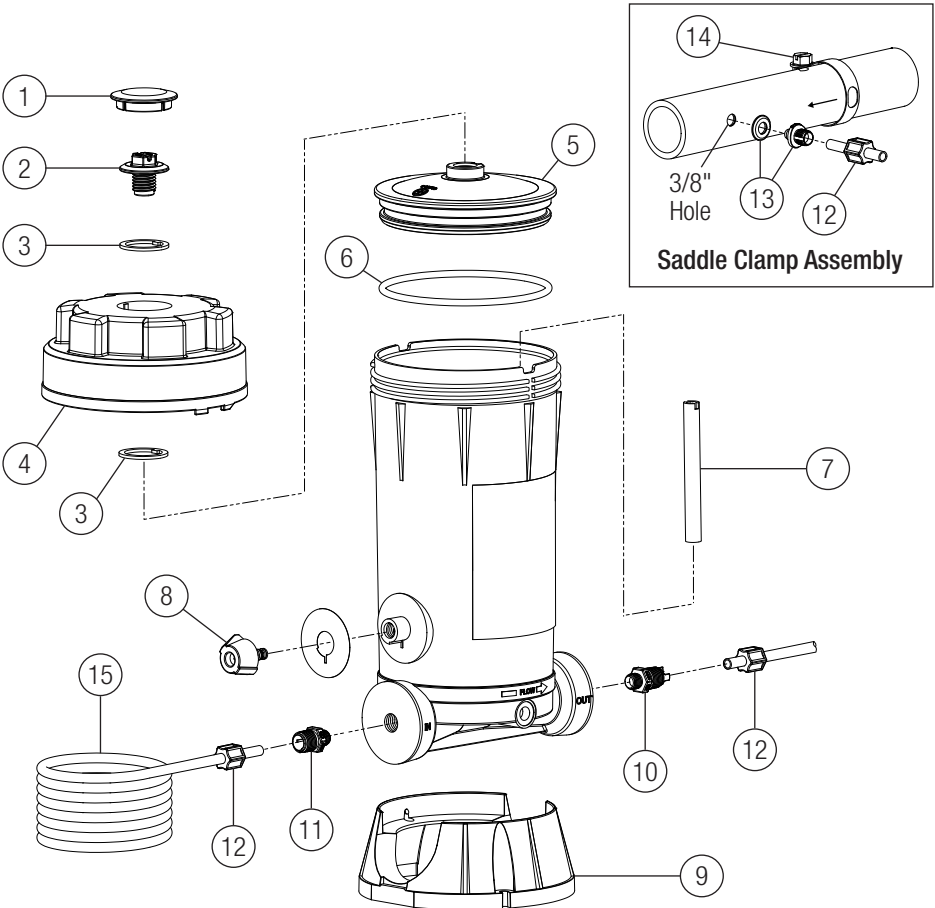




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## CL220 Parts Listing

Ref No.	Part No.	Description	Qty.	Ref No.	Part No.	Description	Qty.
1	CLX200E	Logo Cap	1	9	CLX220B	Base	1
2	CLX200G	Cover Retaining Screw	1	10	CLX220CV	Check Valve Assembly	1
3	CLX200W	Slip Washer	2	11	CLX220D	Inlet Fitting Adapter	1
4	CLX200C2	Cover Cap	1	12	CLX220H	Compression Nuts	4
5	CLX200B	Cover	1	13	CLX220G	Saddle Fitting	2
6	CLX200K	O-Ring	1	14	CLX220K	Saddle Clamp	2
7	CLX200H	Feeder Tube (Some Models)	1	15	CLX220J	Plastic Tubing - 8 ft.	1
8	CLX200PA	Control Valve Assembly	1		SP032712	Hayward Jack's Lube #327	1





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## **HAYWARD® Pool Products Limited Warranty**

Hayward Pool Products, Inc., warrants the components of this product to be free from defects in materials and workmanship during the warranty period. Please visit <https://hayward.com/support/resources/warranty> for product warranty details.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care, Acts of God or as specified in installation and operations manual. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center, please visit us at <https://hayward.com/dealerlocator>.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

**Hayward Industries, 1415 Vantage Park Dr., Suite 400, Charlotte, NC 28203**

**\*Supersedes all previous publications**

Register your product at <https://hayward.com/support/resources/warranty/product-registration>

For further information or consumer  
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